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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,843	10/23/2000	Srikanth Natarajan	10004526-1	1015

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Intellectual Property Administration
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EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 10/01/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/694,843

Applicant(s)

NATARAIA ET AL.

Examiner

Bradley Edelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This is a first office action on the merits of this application. Claims 1-18 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim ends in an incomplete sentence and is therefore unclear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ahearn et al. (U.S. Patent No. 5,926,463, hereinafter "Ahearn").

In considering claims 1 and 14, Ahearn discloses a method and computer program product for determining paths between a start node ("workstation") and an end node ("server") of a communication network (col. 6, lines 31-33), the network being

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formed of sub-networks ("subnets"), the sub-networks having connectors and segments, the start node and end node each corresponding to one of the connectors (col. 5, lines 24-27; col. 12, lines 13-21; Fig. 8), comprising:

Means for receiving information corresponding to the start node and end node (col. 6, lines 31-33);

Means for receiving information corresponding to a type of path of interest (col. 8, lines 2-8, "shortest path");

Means for receiving information corresponding to a type of connector of interest (col. 7, lines 63-67, "router"); and

Means for determining a path between the start node and end node based upon the type of path of interest and the type of connector of interest (col. 6, lines 15-33; col. 7, lines 13-40).

In considering claims 2 and 15, Ahearn further discloses that receiving information corresponding to a type of path comprises receiving information corresponding to at least a shortest path between the start node and end node (col. 8, lines 2-8, "the user is able to view the OSPF area topology").

In considering claims 3 and 16, Ahearn further discloses that each of the sub-networks has at least one level 2 connector ("switch"), each of the sub-networks being configured to intercommunicate with another of the sub-networks via a level 3 connector ("router") (Fig. 8), and wherein receiving information corresponding to a type of

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connector of interest comprises information corresponding to at least one of: level 2 and level 3 connectors, and level 3 connectors (col. 7, lines 63-67; col. 13, lines 40-46, wherein the user can select to view only routers ("layer 3"), only switches ("layer 2"), or a combination of the two (i.e. Fig. 8)).

In considering claim 4, Ahearn further discloses that if the type of connectors selected are level 3 connectors, determining the path between the two nodes comprises:

Identifying sub-networks associated with the start node; and determining whether the end node is associated with at least one of the identified sub-networks (col. 12, lines 13-21, wherein the system "perform[s] a Ping Spray on respective subnet to find all nodes" and "learn[s] new Routers and their associated Networks").

In considering claim 5, Ahearn further discloses that if the type of connectors are level 2 and level 3 connectors, determining a path between the start node and the end node comprises:

Identifying segments associated with the start node; and determining whether the end node is associated with at least one of the identified segments (col. 13, lines 40-59, further describing the "ping" test for layer 2 devices).

In considering claims 6 and 17, Ahearn further discloses if the end node is not associated with at least one of the identified sub-networks, recursively identifying sub-

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networks associated with each of the previously identified sub-networks; and determining whether the end node is associated with at least one of the sub-networks associated with each of the previously identified sub-networks (col. 12, lines 13-21, 23-49, wherein each new router and associated network is scanned and identified for purposes of determining path information).

In considering claims 7 and 18, Ahearn further discloses if the end node is not associated with at least one of the segments, recursively identifying segments associated with each of the previously identified segments; and determining whether the end node is associated with at least one of the segments associated with each of the previously identified segments (col. 14, line 49 – col. 15, line 19, wherein each hop is traversed to determine which nodes are connected to each segment).

In considering claim 8, Ahearn further discloses that determining the path comprises:

Storing the shortest path between the start node and the end node in memory as the current shortest path; and if the type of path of interest is the shortest path, recursively determining paths between the nodes based on the type of connector of interest, such that when a newly determined path between the nodes is shorter than the current shortest path, the current shortest path is replaced with the newly determined path (col. 8, lines 2-8, 25-32; col. 12, lines 13-21, 30-50, wherein updates are made to the topology information when changes in the network occur).

In considering claim 9, Ahearn discloses a system for determining paths between a start node ("workstation") and an end node ("server") of a communication network (col. 6, lines 31-33), the network being formed of sub-networks ("subnets"), the sub-networks having connectors and segments, the start node and end node each corresponding to one of the connectors (col. 5, lines 24-27; col. 12, lines 13-21; Fig. 8), comprising:

A processor (inherent);

A discovery mechanism associated with the processor, the discovery mechanism configured to generate and store topology data specifying connectors and segments of a communication network (col. 7, lines 12-17); and

A layout mechanism associated with the processor and interfaced with the discovery mechanism, the layout mechanism configured to receive the topology data from the discovery mechanism, the layout mechanism configured to drive a display based upon the topology data (Figs. 4 & 8),

Said discovery mechanism being configured to determine a path between a start node and an end node based upon said topology data (Figs. 4 & 8, depicting the viewable display which shows the connectivity data of the network according to topology information).

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In considering claims 10 and 11, Ahearn further discloses a probably path mechanism (i.e. means) for determining a path between the start node and the end node based upon the topology data (col. 8, lines 4-8; col. 6, lines 45-54).

In considering claim 12, as understood, Ahearn further discloses a layout mechanism to convert topology information (including the probable path information) to map information (Figs. 4 & 8, showing the display of the topology and path information).

In considering claim 13, Ahearn further discloses that the probable path mechanism receives information regarding a type of path of interest and a type of connector of interest, and determines a path between the nodes based on this information (col. 7, line 60 – col. 8, line 10).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all correspondences: (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

BE
September 24, 2003



GLENTON B. BURGESS
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